

Perform a Search

EarthExplorer (EE) allows users to search, download, and order data held in United States Geological Survey (USGS) archives through a number of query options. EE uses tabs in the search application to move through each portion of the process. The EE search process/component is divided into four main areas (**Error! Reference source not found.1**):

- Search Criteria Tab - Provides the interface for entering various search options.
- Data Sets Tab - Provides the interface for selecting the datasets to be searched.
- Additional Criteria Tab - Provides an interface for entering additional search criteria specific to the selected datasets.
- Results Tab - Provides the interface for displaying a textual and graphical view of the query results.

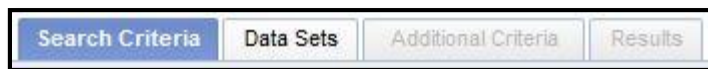


Figure 1 - EE Search Tabs

Search Criteria Tab

The Search Criteria tab provides a location to enter search criteria for an area of interest. The search criteria options include:

- **Address/Place** - Type an address or place name
- **Path/Row** - Type WRS path and row
- **Feature** - Enter US Features/World Features, State, and Feature Type
- **Coordinates** - Enter Degree/Minute/Second or Decimal degrees
- **Predefined Area** - Select from a list of predefined areas for a query
- **Shapefile** - Upload an existing shapefile for the area of interest
- **KML** - Upload an existing KML or KMZ file for the area of interest
- **Google Map Options** - Select Auto-Center, Polygon, and Circle features from the map menu
- **Google Map Interface** - Click on the Google Map to define the area of interest
- **Dates Range** - Enter a date range for data acquisition
- **Result Options** - Modify the number of scenes returned for a standard search
- **Standard Search** - Number of records to return
- **Mass Media Search** - Mass Media Searches are not limited by number of results or size; however, Mass Media Orders in excess of 6 terabytes will require extra processing time and justification.

Enter Search using Address/Place

The Address/Place subcomponent allows you to enter a specific address, latitude, longitude, United States or World feature, or Landsat Worldwide Reference System (WRS) Path/Row.

1. Enter Search Criteria
To narrow your search area: type in an address or place name, enter coordinates or click the map to define your search area (for advanced map tools, view the [help documentation](#)), and/or choose a date range.

Address/Place Path/Row Feature Circle

47914 252nd St, Sioux Falls, SD

Show Clear

Figure 2 - Address

Address - Enter a specific address; for example, in the Address: field, type 47914 252nd St, Sioux Falls, SD (**Error! Reference source not found.2**). Press Enter or click 'Show' to display the location on the map along with the latitude and longitude under the 'Coordinates' section.

Address/Place Path/Row Feature Circle

43 43' 57"N, 096 37' 42"W

Show Clear

Figure 3 - Coordinates

Latitude/Longitude - Enter a specific latitude/longitude; for example, type 43 43' 57" N, 096 37' 42" W (**Error! Reference source not found.3**). Click 'Show' to display the location on the map and to populate the 'Coordinates' section.

Address/Place Path/Row Feature Circle

Point Polygon

Type: WRS2 Path: Row:

Show Clear

Figure 4 - Path Row

Path/Row - Select the Path/Row button to display the Path/Row WRS criteria dialog box (**Error! Reference source not found.4**). Select either WRS1 or WRS2 and then type the Path/Row for the desired area. For example, select 'WRS2' and type Path 31 and Row 29 to identify the center point for

WRS2, Path 31, and Row 29. Click 'Show' to identify the path/row location on the map.

Figure 5 - US/World Feature

US/World Feature - Select either a US or World Feature. Click the 'Feature' button to display the US/World Feature Search dialog box. Type in a geographic feature name or select a State/Country, Feature Class, or Feature type from a pop-down menu (**Error! Reference source not found.5**).

Figure 6 - Degree/Minute/Second

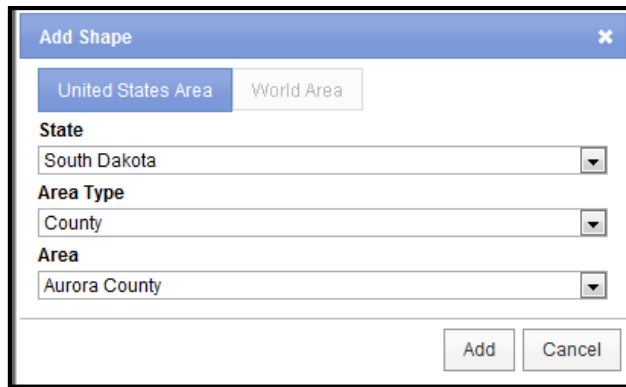
Enter Search using Coordinates - Define an area of interest by manually typing the latitude/longitude in the Coordinates tab. To enter latitude/longitude coordinates manually, select the 'Degree/Minute/Second' or 'Decimal' option. This method displays how the latitude/longitude information is entered. Click 'Add Coordinate' (**Error! Reference source not found.**).

Figure 7 - Add New Coordinate

Click 'Add Coordinate' to display the 'Add new Coordinate' dialog box. As shown in **Error! Reference source not found.**, enter degrees, minutes, and seconds of a point in the dialog box. After clicking Add, the dialog disappears, the point displays on the map, and the coordinates are displayed. Use this method to enter multiple points.

Predefined Area - The 'Predefined Area' option provides a list of predefined areas for a search. The list of predefined areas includes:

- States
- Counties
- Congressional Districts

The image shows a software dialog box titled "Add Shape" with a close button (X) in the top right corner. At the top, there are two tabs: "United States Area" (which is selected and highlighted in blue) and "World Area". Below the tabs, there are three dropdown menus. The first is labeled "State" and has "South Dakota" selected. The second is labeled "Area Type" and has "County" selected. The third is labeled "Area" and has "Aurora County" selected. At the bottom right of the dialog box, there are two buttons: "Add" and "Cancel".

Add Shape

United States Area World Area

State
South Dakota

Area Type
County

Area
Aurora County

Add Cancel

Figure 8 - Add Shape

Selecting the 'Predefined Area' tab displays the 'Add Shape' dialog box as shown in **Error! Reference source not found..** Select the desired State, Area type (State, County, Congress District), and Area (County name or Congressional District name).

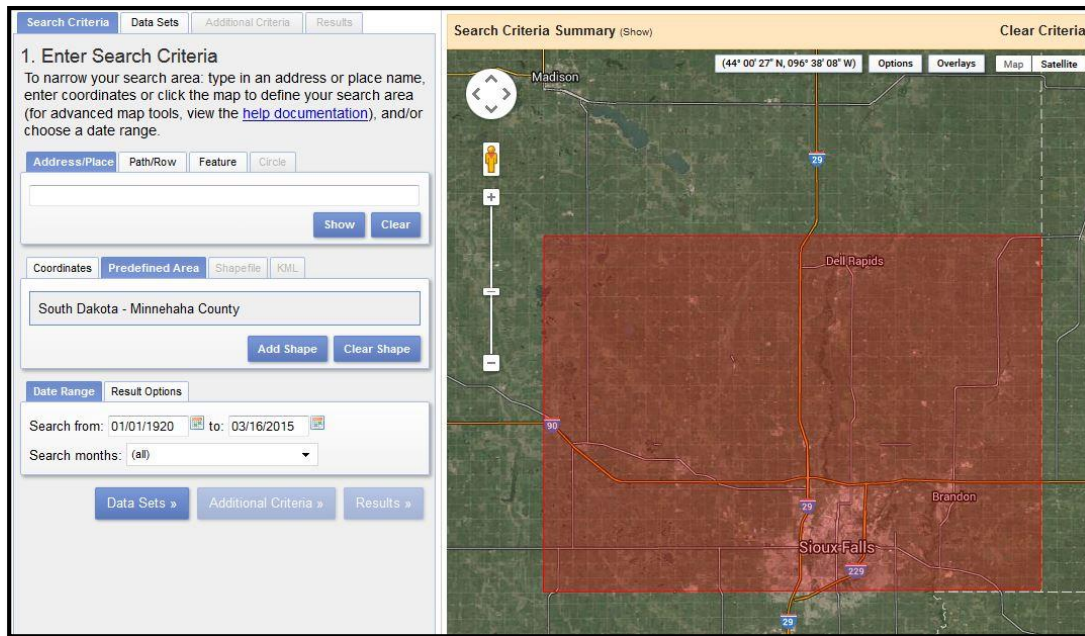


Figure 9 - Predefined Area

The outline of the selected Predefined area is then displayed on the Google Map interface (Figure 9).

Upload ESRI Shapefile - Select the 'Shapefile' tab to display the input form for uploading ESRI Shapefile information for a search area (Figure 10). Shapefiles are limited to one record containing one polygon or line string with a maximum 30 points. The shapefile dialog box allows for the upload of a zip file containing .shp, .shx, .dbf and .prj files.

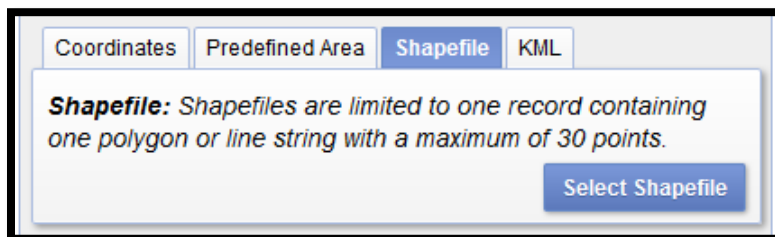


Figure 10 - Upload ESRI Shapefile

The ESRI Shapefile requires all of the following files: .shp, .shx, .dbf and .prj.

Upload KML/KMZ File - Select the 'KML' tab to display the input form for uploading a KML or KMZ file for a search area (Figure 11). The KML or KMZ file is limited to one record containing one polygon or line string with a maximum 30 points.

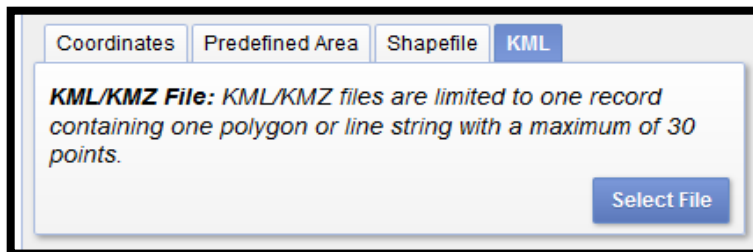


Figure 11 - Upload KML/KMZ file

Browse to the desired KML or KMZ file, select the desired file, and then select 'Open' to upload the KML/KMZ file.

Enter Area of Interest Search using Google Map Interface

Using the Google Map interface, enter the geospatial area of interest using the mouse or other pointing device. The up-to-date Google map is not for purchase or for download; it is to be used as a guide for reference and search purposes only.

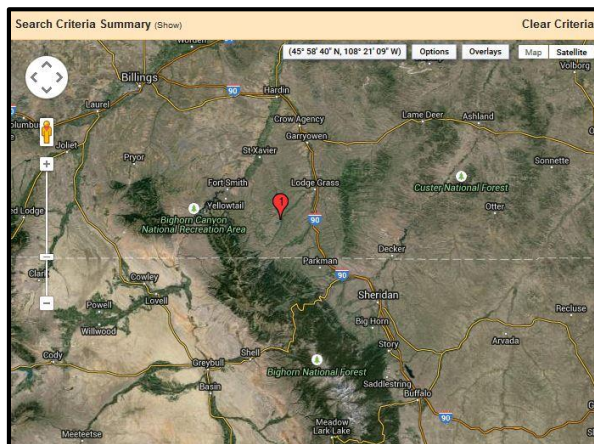


Figure 12 - Single Point Search

Define a single point search (Error! Reference source not found.12) - Click an area on the map once using the mouse to define a single point search. The latitude and longitude of the point selection displays under the 'Coordinates' section. The coordinates can be toggled between Degree/Minute/Second and Decimal degrees.

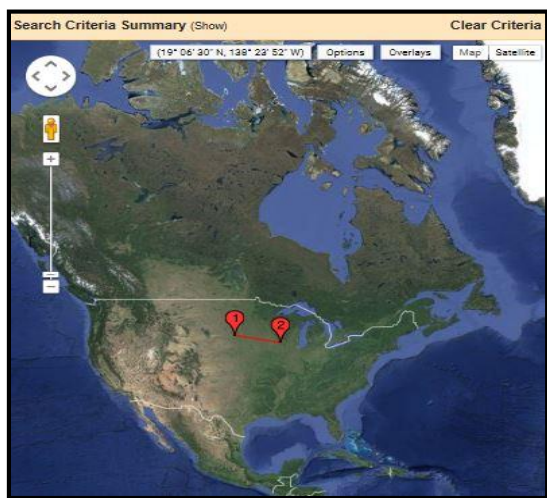


Figure 13 - Line Search

Define a line search (Error! Reference source not found.13) - To perform a line search, select two points on the map to define a line segment. The latitude and longitude of the two points selected display under the 'Coordinates' section.

Define a rectangle - Press the Shift key then click and drag mouse to define rectangle or square. This action defines the constraints of the rectangle/square. If you press the Shift key before making the selection, the resulting selection is added to the existing selection. The latitude and longitude of the four points selected display under the 'Coordinates' section. To modify the rectangle, click one of the numbered points on the map and drag the point to a new location.

Define a polygon - Click multiple times on the map to form shape around interested area. As each point of the polygon is selected, the latitude and longitude of the defined polygon displays under the 'Coordinates' section. To modify the rectangle, click one of the numbered points on the map and drag the point to a new location.

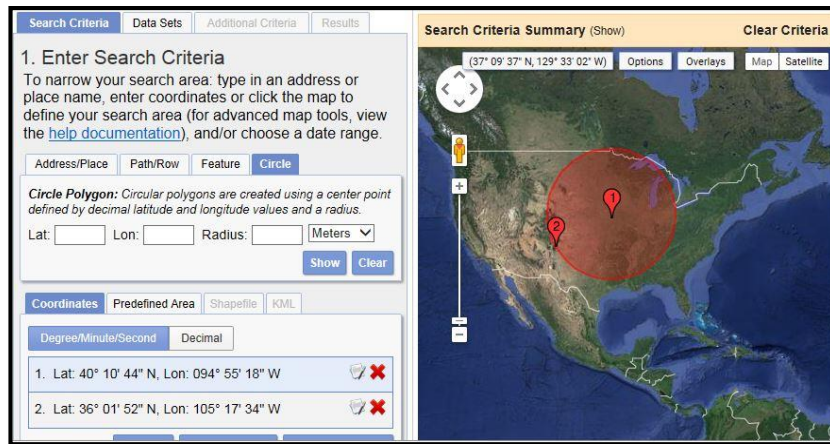


Figure 14 - Define Circle View

Define a circle - Select the Options tab on the Google Map display then click the 'Circle' option. To define a circle, click two points on the map (**Error! Reference source not found.14**). To modify the circle radius, click and drag one of the points to a new location. The coordinates of the points defining the circle display under the

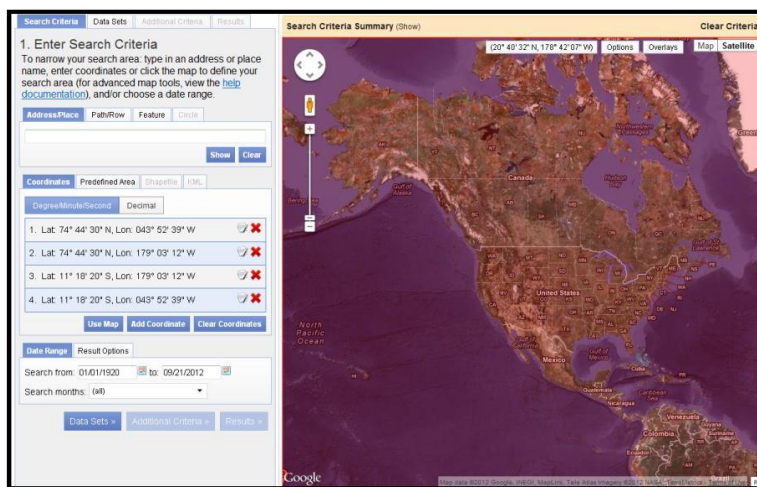


Figure 15 - Use Map View

Use Map - Click the 'Use Map' button to add the current map view as the area of interest. The color of the screen changes, indicating the area displayed on the map as an area of interest (Figure 15). The latitude and longitude of the map extent display under the 'Coordinates' section.

The screenshot shows the 'Date Range' tab of the Earth Explorer search interface. At the top, there are two tabs: 'Date Range' (selected) and 'Result Options'. Below the tabs, there are input fields for 'Search from: mm/dd/yyyy' and 'to: mm/dd/yyyy', each with a calendar icon. Below these is a 'Search month' dropdown menu showing 'Jul' and '2015'. A calendar grid for July 2015 is displayed, with the 13th highlighted. To the right of the calendar are buttons for 'Data Sets »' and 'Results »'. At the bottom of the calendar are 'Today' and 'Close' buttons.

Figure 16 - Date Range

The Dates Selected - option provides a method for entering a beginning and ending date range to refine the search criteria (**Error! Reference source not found.16**). You are not required to modify the default date range; however, a date range is highly recommended to reduce the number of search results returned from a search. 'Search Months' allows you to specify which months to search within the date range specified.

The screenshot shows the 'Result Options' tab of the Earth Explorer search interface. At the top, there are two tabs: 'Date Range' and 'Result Options' (selected). Below the tabs, there are two buttons: 'Standard Search' (selected) and 'Bulk Search'. Below these is a dropdown menu labeled 'Number of records to return:' with the value '10' selected. At the bottom of the tab are three buttons: 'Data Sets »', 'Additional Criteria »', and 'Results »'.

Figure 17 - Number of Results

Results Options - Number of records to return. The EarthExplorer interface allows you to select the number of records to return from a search. Use the 'Results Options' tab to select the maximum number of scenes returned (**Error! Reference source not found.17**).

Once you enter the search criteria, you are ready to select the 'Data Sets' tab at the top or bottom of the 'Enter Search Criteria' form.